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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,302	02/18/2004	Hui Liang Yuan	03-0041	4268
29293 7590 05/04/2007 FREUDENBERG-NOK GENERAL PARTNERSHIP LEGAL DEPARTMENT 47690 EAST ANCHOR COURT PLYMOUTH, MI 48170-2455			EXAMINER HU, HENRY S	
			ART UNIT 1713	PAPER NUMBER
			NOTIFICATION DATE 05/04/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/782,302	<b>Applicant(s)</b> YUAN ET AL.	
	<b>Examiner</b> Henry S. Hu	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on Election of April 5, 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 16-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-12 and 29 is/are rejected.
- 7) ☒ Claim(s) 1, 4, 7-8 and 13-15 is/are objected to.
- 8) ☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4 pages</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to Election filed on April 5, 2007. **Applicant's election of Group I (Claims 1-15 and 29) is traversed with elected Species I in view of remarks on pages 2-3.** The traversal is on the ground(s) that it would not place an undue burden to search and examine the non-elected **Group II (Claim 16) and Group III (Claims 17-28)** with the elected Group I since they are in the relationship of no patentable distinctiveness so that search and examination of entire application can be made without a serious burden. This is not found persuasive because each group is drawn to a technology apparently requiring search in different classification area.

2. In a very close examination, “all three groups are structurally different” as follows: Although each of Group I and Group III may contain the same gasket admixture, combination Group III does not require the particulars of the sub-combinations of either Claim 1 or Claim 29 as discussed by Examiner Alejaminer. Group II may be related to a process of making gasket admixture of Group I. However, Group II can be readily used to prepare materially different admixture other than that of Group I. Group II and III are unrelated since they have different design, modes of operation, and effects. The property as well as its process of making is unique and thereby not interchangeable. Therefore the restriction is appropriate.

The requirement is still deemed proper and is therefore made FINAL. **Claims 1-29** with a total of **four** independent claims (Claim 1, Claim 16, Claim 17 and Claim 29) are now pending, while nonelected **Group II (Claim 16) and Group III (Claims 17-28)** are withdrawn from consideration. An action follows.

### *Specification*

3. The disclosure is objected to because of the following informalities:

(a) On **page 10**, paragraph 0032 at line 1, the use of “.05 parts” may be improper. A correction to “**0.05 parts**” is needed so as to be consistent with the same or similar wording used in this application.

(b) On **page 10**, paragraph 0033 at lines 5-6, the use of “3,5,5-trimethyl-3-cyclohexene-1-one, cyclohexene-1-one” for solvent may be improper. Applicants may need to confirm such chemical names. This Examiner believes a correction to “**3,5,5-trimethyl-3-cyclohexane-1-one, cyclohexanone**” may be needed.

Appropriate corrections are required.

### *Claim Objections*

4. **Claims 1, 4, 7-8 and 13-14** are objected to because of the following informalities:

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(a) On **Claim 1-(d) at line 1**, the language of “magnesium oxide reduction-agent particulate” may be improper. A change to “**magnesium oxide to be used as reduction-agent particulate**” may be needed. Otherwise, A reduction agent may be used so as to reduce magnesium oxide.

(b) On **Claim 1-(d) at line 2**, the language of “said metallic oxide” is improper since it is without support. A change to “**said magnesium oxide**” is needed according to MPEP.

(c) On **Claim 4 at line 2**, the use of “.05 parts” may be improper. A correction to “**0.05 parts**” is needed so as to be consistent with the same or similar wording used in this application.

(d) On **Claim 7 at line 3** as well as **Claim 8 at lines 2-3**, the use of “3,5,5-trimethyl-3-cyclohexene-1-one, cyclohexene-1-one” for solvent may be improper. Applicants may need to confirm such chemical names. This Examiner believes a correction to “**3,5,5-trimethyl-3-cyclohexane-1-one, cyclohexanone**” may be needed.

(e) On **Claim 13 at line 2** and **Claim 14 at line 4**, chemical recitation of “n,n’-dicinnamylidene-1,6-hexene” is wrong. A correction to “**N,N’-dicinnamylidene-1,6-hexene**” is needed.

***Claim Rejections - 35 USC § 102***

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The limitation of parent **Claim 1** in present invention relates to a gasket admixture, comprising four components including:

(A) fluoroelastomer particulate derived from vinylidene-fluoride, hexafluoropropene, and tetrafluoroethylene, said fluoroelastomer having a Mooney viscosity from 25-75, fluorine from 65-69 atomic weight percent, at least 90 weight percent fluoroterpolymer, and halogenated crosslink sites;

(B) inert particulate from 10-50 parts per 100 parts by weight of said fluoroelastomer particulate, said inert particulate having particle sizes less than about 250 mesh;

(C) curing agent from about 0.5-20 parts per 100 parts by weight of said fluoroelastomer particulate, wherein said curing agent crosslinks said fluoroelastomer particulate to generate cured fluoroelastomer and hydrogen ions; and

(D) magnesium oxide reduction-agent particulate from 5-50 parts per 100 parts by weight of said fluoroelastomer particulate, said metallic oxide reduction-agent particulate having particle sizes less than about 250 mesh, said magnesium oxide having a BET surface area from 40-70 square meters per gram.

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Other parent **Claim 29** relates to *a gasket admixture of Claim 1 but without inert particulate*.

*See other limitations of dependent Claims 2-15.*

7. **Claims 1-7, 9-12 and 29** are rejected under 35 U.S.C. 102(b) as being anticipated by Hoover et al. (US 6,410,630 B1).

8. **Claims 1-5, 9-12 and 29** are rejected under 35 U.S.C. 102(a) as being anticipated by Osen et al. (US 2003/0144400 A1).

9. **Claims 1, 4-7, 9-12 and 29** are rejected under 35 U.S.C. 102(b) as being anticipated by Close (US 4,421,878).

**Three different 102 rejections are applied.** It is noted that the above-mentioned **three** references including **Hoover, Osen and Close** are cited as “X reference” for the respective claims in the search report for European application number 05-00-1468. It is also noted that **Claim 29** is a similar gasket admixture of parent **Claim 1** since Claim 29 is without using inert particulate. Regarding two parent claims including **Claim 1 and Claim 29 as well as its respective dependent claims**, each of Hoover, Osen and Close has individually prepared the claimed gasket admixture. Detail is cited inside the search report.

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To be more specific, see **Hoover** on column 10 at line 16 and Claim 13 at line 4 for the addition of polymer microsphere as additive. Column 1, line 12-20 for “gasket and the like articles”. See **Osen** on paragraph 0002 for “gasket article”. See **Close** on column 17 at line 12 for “gasket article”.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. **Claims 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Osen et al. (US 2003/0144400 A1) in view of Hoover et al. (US 6,410,630 B1).



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12. **Claims 2-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Close (US 4,421,878) in view of Hoover et al. (US 6,410,630 B1).

**Two different 103 rejections are applied.** The above discussion of the disclosures of the prior art **Hoover, Osen and Close** of this office action is incorporated here by reference. In making such a gasket admixture, Hoover has already taught the limitations of **Claims 2-3 being silent by Close** and the limitations of **Claims 6-7 being silent by Osen**. It is obvious to apply Hoover's limitation into Osen's or Close's gasket composition since they are dealing with the same or similar gasket admixture. By doing so, more diversified product can be readily obtained.

### ***Conclusion***

13. **Claims 8 and 13-15** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to dependent **Claims 8 and 13-15 being silent by each reference of Hoover, Osen and Close**, **Claim 8** is found to use a specific solvent such as a blend solvent made from **20 wt% of 3,5,5-trimethyl-3-cyclohexenene-1-one, 20 wt% of cyclohexene-1-one, and 60 wt% of butyl cellulose acetate**; while **Claims 13-15** are found to use a special curing agent such as **N,N'-dicinnamylidene-1,6-hexene**. Each reference may have used some

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solvents and some curing agents in the course of making gasket admixture. However, the references in combination or alone cannot teach or suggest using such a specific solvent mixture and/or such a specific curing agent.

14. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The following references relate to a gasket admixture comprising three or four components as specified:

US 6,291,576 B1 to Schmiegel only discloses the preparation of crosslinkable fluoroelastomer composition comprising a fluoroelastomer, a curative for the fluoroelastomer, and a molecular sieve additive. Magnesium oxide may be added together (column 7, line 27). Such a composition may be used for making gasket (column 3, line 18). However, the claimed terpolymer VDF/HFP/TFE with halogenated crosslink site is not disclosed or suggested (column 4, line 5-23). Therefore, Schmiegel fails to teach or fairly suggest the claimed gasket admixture.

15. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu** whose telephone number is (571) 272-1103. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization

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where this application or proceeding is assigned is (571) 273-8300 for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

Patent Examiner, Art Unit 1713, USPTO

April 30, 2007



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